CLAIMS

1. Bone anchoring element comprising a tubular implant to be inserted into bone tissue for anchoring a prosthetic component located outside the bone, which is open at one end thereof intended to be inserted into the bone tissue while the other end intended to be directed towards externally of the bone tissue located portions is closed by a compact impermeable end wall portion with attachment for the prosthetic component on the outside thereof the lumen extending from the open end through the total implant to the end wall portion so that the lumen after insertion of the implant into the bone tissue includes at least the entire portion of the implant which is intended to be anchored in the bone tissue, characterized in that the implant has a compact impermeable side wall with a stop mark for defining an end position for the implant at insertion into the bone tissue, and that the lumen of the implant also includes a cavity in the end wall portion open towards the lumen so that the lumen has such an extension that it after insertion of the implant into the bone also will be located above the bone level established around the implant.

2. Bone anchoring element according to claim 1 wherein the stop mark is formed by an inside or outside shoulder which can be engaged with the bone tissue.

3. Bone anchoring element according to claim 2 wherein the shoulder is formed by the inside of the end wall portion.

4. Bone anchoring according to claim 3, wherein the shoulder is formed by said one end.

5. Bone anchoring element according to any of claims 1 to 4, wherein the side wall forms threads on the outside or inside thereof.

6. Bone anchoring element according to claim 5 wherein existing outside and inside threads are synchronic macro or micro threads.

7. Bone anchoring element according to claim 5 or 6 wherein the threads have double entrances.

8. Bone anchoring element according to claim 1 wherein the outer and/or inner surface of the side wall has micro topography.

9. Bone anchoring element according to claim 1 wherein the lumen of the implant also includes a cavity located in the end wall portion open towards the lumen so that the lumen has such an extension that it after insertion of the implant into the bone also will be located above the bone level established around the implant.

10. Bone anchoring element according to claim 9 wherein the lumen above the bone level established around the implant has a surface which amounts to at least 20 % of the total surface of the lumen.

11. Bone anchoring element according to claim 1 wherein the total potential bone contact surface is at least double the size of a compact implant having the same external measures.

12. Bone anchoring element according to claim 1 which after insertion occupies a bone volume which is maximum 30 % of the bone volume occupied by a compact implant of corresponding length (height) and diameter.

13. Bone anchoring element according to claim 1 which by the partially closed lumen bordering the bone tissue provides conditions for bone formation and bone compacting in the total lumen resulting in regeneration of bone also above the bone level established around the implant.

14. Bone anchoring element according to claim 1 which by its partially closed lumen bordering the bone tissue provides conditions for protection and reception of corporal bone, bone substitute and/or bone stimulating means in

order to accelerate the bone formation and bone compacting in the entire lumen resulting in regeneration of bone also above the bone level established around the implant.

15. Bone anchoring according to claim 1 wherein the length (height) of the implant is substantially equal to the diameter.

16. Bone anchoring element according to claim 1 wherein the implant has a diameter which is larger than its length (height).